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REPLY TO WRITTEN OPINION
INTERNATIONAL PATENT APPLICATION PCT/FI2003/000718
APPLICANT: NOKIA CORPORATION
DUE DATE: 27 AUGUST 2004

On account of the Written Opinion issued on 29 June 2004 we submit the following:

We respectfully disagree with the Examiner about the novelty/inventive step considerations concerning the current claims.

Namely, the closest prior art, publication D1, relates generally to broadcasting of service capabilities ("service capabilities" in terms of that particular publication) in a cellular network. A specific capability message constructed by an RNC is sent to a base station to be forwarded to mobile terminals within the cell served by the base station. The message just informs the terminals about the services (in this case by "services" basically referring to plain network parameters, that is, possibly varying and diverse capabilities of the base station/network itself) supported by the system within that particular cell in order to let the mobile terminal(s) properly register with the network (page 14, rows 3, 19) by utilizing a suitable technique, if any, during the activation phase of the terminal(s) (page 12, row 31->). A bitmap included in the message includes definitions of applicable radio access technology types (GSM or IS-95, for example), generations (first: GSM, second: UMTS, etc), and related radio frequency bands. Therefore, the services as such are not unequivocally defined or special characteristic thereof addressed in relation to the mobile terminals' capabilities.

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Meanwhile, the current invention is about indicating terminal capability requirements based on at least one of the following factors as defined by e.g. current claim 1: time slot configuration, modulation (GMSK or 8-PSK, for example) , terminal/MBMS capability class (example of a division into three classes given by the description) and bit rate, as these are the crucial variables determining the terminal capacity to properly receive the offered MBMS service(s). The terminals/network shall determine based on the received, unambiguous information whether they/the terminals are capable or incapable to receive related service data to avoid unnecessary transmissions/reception attempts. Neither the MBMS service, being a service for delivering multimedia content that possibly varies a lot, nor the aforesaid factors have been explicitly suggested by D1 in connection with the suggested "capabilities message" with a different meaning.

Furthermore, in the current invention, the requirements are optionally broadcast in a (CBS) schedule message so that the terminals in-range may decide in advance whether to monitor the radio blocks disclosing the service-related information or to stay in a low-power (consumption) mode to save the battery (see e.g. page 10, rows 12-17 of the description and claims 12-13).

Please find attached a set of amended claims (clear and marked-up copy) including more specific definitions of the actual service scenario itself (MBMS) and the factors constituting the terminal requirements as being determined in the description (see e.g. original page 5 of the description) and claim 1 as originally filed. Other minor amendments are mainly linguistic (a->the, etc) and made to further clarify the claimed expressions.

The corresponding amendments have been introduced to the summary portion of the application: find attached replacement pages 5, 6, 7, and 7a to replace original pages 5, 6, and 7 of the description.

Yours faithfully,
BERGGREN OY AB

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terminal is capable of receiving data on two time slots 302. If, for example, in GERAN the media stream is sent on three adjacent time slots per carrier 304, two time slot capable terminals just cannot receive the service 306. Also, if higher data rate is to be provided by using 8 PSK modulation, only the terminals that support
5 EDGE can receive the service. As a consequence, there exists a great demand for defining and notifying about what kind of requirements the terminals must meet in order to be able to receive a particular MBMS service. The same situation applies to UTRAN with terminals providing varying support for bit-rate adaptation and other properties.

10

An object of the present invention is to provide a feasible and reliable technique for indicating requirements for broadcast and multicast service reception. The object is achieved with a method and a device which either explicitly or implicitly provide that information to a receiving end a priori, before actual attempts by the receiving
15 end to receive overly demanding or otherwise incompatible transmission. Thereby, most error cases can be avoided and average power consumption reduced, as the terminal does not need to monitor the broadcast blocks it cannot receive.

A method according to the invention for indicating one or more terminal capability requirements for point-to-multipoint MBMS service reception in a wireless system is characterized in that in that said method comprises the step of transmitting a
20 broadcast or multicast message indicating said terminal capability requirements over the air interface to at least one terminal within the service range in order to allow the terminal to determine whether it is capable of receiving the service or not, said requirements being indicated in relation to at least one of the following: time slot configuration, modulation type, bit rate, capability class.
25

In another aspect of the invention, a method for indicating requirements for point-to-multipoint MBMS service reception in a wireless system to be performed by a terminal operable in said system, is characterized in that said method comprises the step informing the terminal's capabilities in relation to at least one of the following:
30 time slot configuration, modulation type, bit rate, and capability class, to said system in order to enable the system to deduce on the basis of informed data whether the terminal is capable of receiving the service or not.

In a further aspect of the invention, a terminal operable in a wireless system, comprising processing means and memory means for processing and storing
35 instructions and data, is characterized in that said terminal is arranged to receive a

message indicating requirements for point-to-multipoint MBMS service reception and arranged to determine on the basis of said requirements whether it is capable of receiving the service or not, the requirements indicated in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class.

- 5 In a further aspect of the invention, a terminal operable in a wireless system, comprising processing means and memory means for processing and storing instructions and data, is characterized in that it is arranged to inform its capabilities in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to said system for the examination of fulfilment of
10 point-to-multipoint MBMS service reception requirements.

- In a further aspect of the invention, a network element operable in a wireless system, comprising processing means and memory means for processing and storing instructions and data, is characterized in that it is arranged to send a message indicating requirements in relation to at least one of the following: time slot
15 configuration, modulation type, bit rate, and capability class, for point-to-multipoint MBMS service reception to be delivered to at least one wireless terminal within the service range in order to allow said wireless terminal to determine whether it is capable of receiving the service or not.

- In a further aspect of the invention, a network element operable in a wireless
20 system, comprising processing means and memory means for processing and storing instructions and data, is characterized in that it is arranged to receive a notification from a terminal in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, and deduce on the basis of said notification whether the terminal is capable of receiving a point-to-multipoint
25 MBMS service or not.

- A system according to the invention comprises a network element and at least one wireless terminal operable in said system, and the system is characterized in that said network element comprises means for sending a message indicating requirements for point-to-multipoint MBMS service reception in relation to at least
30 one of the following: time slot configuration, modulation type, bit rate, and capability class, to be delivered to at least said wireless terminal within the service range and said terminal comprises means for receiving said broadcast message indicating requirements for point-to-multipoint service reception and means for

determining on the basis of said indication whether it is capable of receiving the service or not.

5 In one embodiment of the invention a system already comprising CBS (Cell Broadcast Service) is supposed to support more versatile MBMS services as well and notify terminals in-range about the requirements for service reception in conjunction with sending a CBS schedule message disclosing data about MBMS services instead. In practise, the requirements are notified by informing the terminals about an applicable MBMS capability class. Three different capability
10 classes define the minimum capabilities required for receiving available services.

In another embodiment of the invention a mobile terminal capable of receiving point-to-multipoint services informs the system it is connected to about its capabilities such as a maximum number of concurrently receivable downlink time
15 slots for joining a certain MBMS multicast service. The system checks if necessary minimum requirements for the joining/service reception are met and if that is the case, accepts the joining request and if not, rejects it.

The accompanying dependent claims describe some embodiments of the invention.

20 In the following, the invention is described in more detail by reference to the attached drawings, wherein

Fig. 1 is a block diagram of a MBMS capable system as referred to in the description of the background of the invention.

25 Fig. 2 depicts provision of MBMS broadcast and multicast services as presented in the reference [2].

Fig. 3 depicts a scenario, wherein a mobile terminal supports monitoring of two time slots per frame and thus is not capable of receiving a service requiring three time slots.

30 Fig. 4 is a signalling chart disclosing one option for MBMS Broadcast service activation and requirements indication as proposed in a first embodiment of the invention.

Fig. 5 is an example of an indication request message disclosed in figure 4

35 Fig. 6 illustrates one possible MBMS capability class division according to the first embodiment of the invention.

Fig. 7 illustrates a CBS schedule message in accordance with the first embodiment of the invention.

Fig. 8A is a flow diagram disclosing the first embodiment of the invention

Fig. 8B is a flow diagram disclosing a second embodiment of the invention

5 Fig. 9A is a block diagram of a wireless terminal, substantially a cellular phone, capable of sending and receiving broadcast/multicast data according to the invention.

Fig. 9B is a block diagram of a network element capable of sending and receiving broadcast/multicast data according to the invention.

Claims

1. A method for indicating one or more terminal capability requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in a wireless system, **characterized** in that said method comprises the step
5 of
 - transmitting a broadcast or multicast message indicating said terminal capability requirements over the air interface to at least one terminal within the service range in order to allow the terminal to determine whether it is capable of receiving the service or not (822), said requirements being indicated in
10 relation to at least one of the following: time slot configuration, modulation type, bit rate, capability class.
2. ~~A~~The method of claim 1, **characterized** in that a decision of whether to receive the service or not is made in the terminal on the basis of said indication.
3. ~~A~~The method of claim 1-2, **characterized** in that it further comprises a step
15 wherein said requirements for receiving the service are defined (820).
4. ~~A~~The method of claim 1-2, **characterized** in that it further comprises a step wherein the service-related data is transmitted in conformity with indicated requirements (824).
5. ~~A~~The method of claim 1-2, **characterized** in that said requirements are
20 indicated in said message implicitly with an identifier associated to a certain set of requirements.
6. ~~A~~The method of claim 1-2, **characterized** in that said requirements are indicated in said message explicitly with parameters.
7. ~~A~~The method of claim 1-6, **characterized** in that said system is substantially
25 GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System) system.
8. ~~A~~The method of claim 1-7, **characterized** in that said message is transmitted to the terminals over radio access network.

9. ~~A~~The method of claim 8, **characterized** in that said radio access network is GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS Terrestrial Radio Access Network).

5 10. ~~A~~The method of claim 1-8, **characterized** in that said message is originated by a network element.

11. ~~A~~The method of claim 1-10, **characterized** in that said message is sent by the CBC (Cell Broadcast Centre) or RNC/BSC (Radio Network Controller/BaseStation Controller).

10 12. ~~A~~The method of claim 1-8, **characterized** in that said message is substantially a schedule message.

13. ~~A~~The method of claim 12, **characterized** in that said schedule message is CBS (Cell Broadcast Service) service specific.

14. ~~A~~The method of claim 1-6, **characterized** in that said message is a discrete indication message.

15 15. A method for indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in a wireless system to be performed by a terminal operable in said system, **characterized** in that said method comprises the step of

20 -informing the terminal's capabilities in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to said system in order to enable the system to deduce on the basis of the informed data whether the terminal is capable of receiving the service or not (804).

25 16. ~~A~~The method of claim 15, **characterized** in that it further comprises a step (806) wherein the system either accepts or rejects the terminal's join request based on said deduction.

17. ~~A~~The method of claim 15, **characterized** in that said system is substantially GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System) system.

18. ~~A~~The method of claim 15, **characterized** in that said informing is performed over a radio access network that is substantially GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS Terrestrial Radio Access Network).

5 19. ~~A~~The method of claim 15, **characterized** in that said informed data indicates at least one of the following features supported by said terminal: time slot configuration, modulation type, bit rate, capability class.

20. ~~A~~The method of claim 15-16, **characterized** in that it further comprises a step wherein the service-related data is transmitted in conformity with indicated requirements (810).

10 ~~21. A method of claim 16-20, characterized in that said point-to-multipoint service is MBMS (Multimedia Broadcast/Multicast Service).~~

~~22-21.~~ AThe method of claim 16-20, **characterized** in that said point-to-multipoint service is substantially a multicast service.

15 ~~23-22.~~ AThe method of claim 16-20, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

20 ~~24-23.~~ A terminal (900) operable (904, 906, 914, 915) in a wireless system, comprising processing means (908) and memory means (910) for processing and storing instructions and data, **characterized** in that said terminal is arranged to receive a message indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception and further arranged to determine on the basis of said requirements whether it is capable of receiving the service or not, said requirements indicated in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class.

25 ~~25-24.~~ AThe terminal of claim 24~~3~~, **characterized** in that it is arranged to specify said requirements indicated in said message by associating at least one identifier included in said message to a certain set of requirements.

30 ~~26-25.~~ AThe terminal of claim 24~~3~~, **characterized** in that it is arranged to extract said requirements directly from said message wherein said requirements are described explicitly.

~~27.26.~~ ~~A~~The terminal of claim 24~~3~~, **characterized** in that said message to be received is a point-to-multipoint message.

~~28.27.~~ ~~A~~The terminal of claim 24~~3~~, **characterized** in that it is substantially a GSM (Global System for Mobile communication) or UMTS (Universal Mobile Telecommunications System) terminal.

~~29.28.~~ ~~A~~The terminal of claim 24~~3~~, **characterized** in that it is arranged to extract said indications of service requirements from a schedule message.

~~30.~~A terminal of claim 24, **characterized** in that it is arranged to extract at least one of the following parameters defining said requirements from said message: time slot configuration, modulation type, bit rate, capability class.

~~31.29.~~ ~~A~~The terminal of claim 24~~3~~, **characterized** in that it is arranged to receive said message from the system over the air interface congruent with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

~~32.30.~~ A terminal (900) operable (904, 906, 914, 915) in a wireless system, comprising processing means (908) and memory means (910) for processing and storing instructions and data, **characterized** in that it is arranged to inform its capabilities in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to said system for the examination of fulfilment of point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception requirements.

~~33.31.~~ ~~A~~The terminal of claim 32~~0~~, **characterized** in that said informing is to be included in a join request for a multicast service.

~~34.32.~~ ~~A~~The terminal of claim 32~~0~~, **characterized** in that it is substantially a GSM (Global System for Mobile communication) or UMTS (Universal Mobile Telecommunications System) terminal.

~~35.33.~~ A network element (918) operable (920) in a wireless system, comprising processing means (923) and memory means (921) for processing and storing instructions and data, **characterized** in that it is arranged to send a message indicating requirements in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception to be delivered

to at least one wireless terminal within the service range in order to allow said wireless terminal to determine whether it is capable of receiving the service or not.

36.34. AThe network element of claim 353, characterized in that said message to be sent is a point-to-multipoint message.

5 37.35. AThe network element of claim 353, characterized in that it is arranged to define said requirements for receiving said point-to-multipoint service.

38.36. AThe network element of claim 353, characterized in that it is arranged to receive said requirements for point-to-multipoint service reception prior to indicating them.

10 39.37. AThe network element of claim 353, characterized in that it is arranged to insert said indication of requirements into said message by at least one identifier associated to a certain set of requirements.

40.38. AThe network element of claim 353, characterized in that it is arranged to insert said indication of requirements into said message explicitly by at least one parameter.

41.39. AThe network element of claim 353, characterized in that said it is arranged to operate in a GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System) system.

20 42.40. AThe network element of claim 353, characterized in that it is arranged to transmit said message to be delivered over radio access network.

43.41. AThe network element of claim 420, characterized in that said radio access network is GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS Terrestrial Radio Access Network).

25 44.42. AThe network element of claim 353, characterized in that it is substantially the CBC (Cell Broadcast Centre).

45.43. AThe network element of claim 353, characterized in that said message to be sent is substantially a schedule message.

46.44. ~~A~~**The** network element of claim 353, **characterized** in that said message to be sent is a discrete indication message.

~~47. A network element of claim 35, characterized in that said message to be sent includes at least one of the following requirements: time slot configuration, modulation type, bit rate, capability class.~~

~~48. A network element of claim 35, characterized in that said point-to-multipoint service is MBMS (Multimedia Broadcast/Multicast Service).~~

49.45. ~~A~~**The** network element of claim 353, **characterized** in that said point-to-multipoint service is substantially a broadcast or multicast service.

10 50.46. ~~A~~**The** network element of claim 353, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

15 51.47. A network element (918) operable (920) in a wireless system, comprising processing means (923) and memory means (921) for processing and storing instructions and data, **characterized** in that it is arranged to receive a notification from a terminal in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, and deduce on the basis of said notification whether the terminal is capable of receiving a point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service)-service or not.

20 52.48. ~~A~~**The** network element of claim 5147, **characterized** in that it is arranged to accept or reject the terminal's join request based on said decision.

~~53. A network element of claim 51, characterized in that said point-to-multipoint service is MBMS (Multimedia Broadcast/Multicast Service).~~

25 54.49. ~~A~~**The** network element of claim 5147, **characterized** in that said point-to-multipoint service is substantially a multicast service.

55.50. ~~A~~**The** network element of claim 5147, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

30 56.51. A system comprising a network element (918) and at least one wireless terminal (900) operable in said system, **characterized** in that said network element

- (918) comprises means (920) for sending a message indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to be delivered to at least said
- 5 wireless terminal (900) within the service range and said terminal (900) comprises means (906, 914, 915, 910) for receiving said broadcast message indicating requirements for point-to-multipoint service reception and means (908) for determining on the basis of said requirements whether it is capable of receiving the service or not.
- 10 ~~57.52.~~ AThe system of claim 561, **characterized** in that said message to be sent is a point-to-multipoint message.
- ~~58.53.~~ AThe system of claim 561, **characterized** in that said network element (918) further comprises means (923) for defining said requirements for point-to-multipoint service reception.
- 15 ~~59.54.~~ AThe system of claim 561, **characterized** in that said network element (918) further comprises means (920) for receiving said requirements for point-to-multipoint service reception prior to sending said message indicating said requirements.

Claims

1. A method for indicating one or more terminal capability requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in a wireless system, **characterized** in that said method comprises the step
5 of

-transmitting a broadcast or multicast message indicating said terminal capability requirements over the air interface to at least one terminal within the service range in order to allow the terminal to determine whether it is capable of receiving the service or not (822), said requirements being indicated in
10 relation to at least one of the following: time slot configuration, modulation type, bit rate, capability class.
2. The method of claim 1, **characterized** in that a decision of whether to receive the service or not is made in the terminal on the basis of said indication.
3. The method of claim 1-2, **characterized** in that it further comprises a step
15 wherein said requirements for receiving the service are defined (820).
4. The method of claim 1-2, **characterized** in that it further comprises a step wherein the service-related data is transmitted in conformity with indicated requirements (824).
5. The method of claim 1-2, **characterized** in that said requirements are
20 indicated in said message implicitly with an identifier associated to a certain set of requirements.
6. The method of claim 1-2, **characterized** in that said requirements are indicated in said message explicitly with parameters.
7. The method of claim 1-6, **characterized** in that said system is substantially
25 GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System) system.
8. The method of claim 1-7, **characterized** in that said message is transmitted to the terminals over radio access network.

9. The method of claim 8, **characterized** in that said radio access network is GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS Terrestrial Radio Access Network).
10. The method of claim 1-8, **characterized** in that said message is originated by a network element.
11. The method of claim 1-10, **characterized** in that said message is sent by the CBC (Cell Broadcast Centre) or RNC/BSC (Radio Network Controller/BaseStation Controller).
12. The method of claim 1-8, **characterized** in that said message is substantially a schedule message.
13. The method of claim 12, **characterized** in that said schedule message is CBS (Cell Broadcast Service) service specific.
14. The method of claim 1-6, **characterized** in that said message is a discrete indication message.
15. A method for indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in a wireless system to be performed by a terminal operable in said system, **characterized** in that said method comprises the step of
- informing the terminal's capabilities in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to said system in order to enable the system to deduce on the basis of the informed data whether the terminal is capable of receiving the service or not (804).
16. The method of claim 15, **characterized** in that it further comprises a step (806) wherein the system either accepts or rejects the terminal's join request based on said deduction.
17. The method of claim 15, **characterized** in that said system is substantially GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System) system.

18. The method of claim 15, **characterized** in that said informing is performed over a radio access network that is substantially GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS Terrestrial Radio Access Network).
19. The method of claim 15, **characterized** in that said informed data indicates at least one of the following features supported by said terminal: time slot configuration, modulation type, bit rate, capability class.
20. The method of claim 15-16, **characterized** in that it further comprises a step wherein the service-related data is transmitted in conformity with indicated requirements (810).
21. The method of claim 16-20, **characterized** in that said point-to-multipoint service is substantially a multicast service.
22. The method of claim 16-20, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.
23. A terminal (900) operable (904, 906, 914, 915) in a wireless system, comprising processing means (908) and memory means (910) for processing and storing instructions and data, **characterized** in that said terminal is arranged to receive a message indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception and further arranged to determine on the basis of said requirements whether it is capable of receiving the service or not, said requirements indicated in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class.
24. The terminal of claim 23, **characterized** in that it is arranged to specify said requirements indicated in said message by associating at least one identifier included in said message to a certain set of requirements.
25. The terminal of claim 23, **characterized** in that it is arranged to extract said requirements directly from said message wherein said requirements are described explicitly.
26. The terminal of claim 23, **characterized** in that said message to be received is a point-to-multipoint message.

27. The terminal of claim 23, **characterized** in that it is substantially a GSM (Global System for Mobile communication) or UMTS (Universal Mobile Telecommunications System) terminal.
- 5 28. The terminal of claim 23, **characterized** in that it is arranged to extract said indications of service requirements from a schedule message.
29. The terminal of claim 23, **characterized** in that it is arranged to receive said message from the system over the air interface congruent with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.
- 10 30. A terminal (900) operable (904, 906, 914, 915) in a wireless system, comprising processing means (908) and memory means (910) for processing and storing instructions and data, **characterized** in that it is arranged to inform its capabilities in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to said system for the examination of fulfilment of point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception requirements.
- 15 31. The terminal of claim 30, **characterized** in that said informing is to be included in a join request for a multicast service.
32. The terminal of claim 30, **characterized** in that it is substantially a GSM (Global System for Mobile communication) or UMTS (Universal Mobile Telecommunications System) terminal.
- 20 33. A network element (918) operable (920) in a wireless system, comprising processing means (923) and memory means (921) for processing and storing instructions and data, **characterized** in that it is arranged to send a message indicating requirements in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception to be delivered to at least one wireless terminal within the service range in order to allow said wireless terminal to determine whether it is capable of receiving the service or not.
- 25 34. The network element of claim 33, **characterized** in that said message to be sent is a point-to-multipoint message.
- 30

35. The network element of claim 33, **characterized** in that it is arranged to define said requirements for receiving said point-to-multipoint service.
36. The network element of claim 33, **characterized** in that it is arranged to receive said requirements for point-to-multipoint service reception prior to
5 indicating them.
37. The network element of claim 33, **characterized** in that it is arranged to insert said indication of requirements into said message by at least one identifier associated to a certain set of requirements.
38. The network element of claim 33, **characterized** in that it is arranged to insert
10 said indication of requirements into said message explicitly by at least one parameter.
39. The network element of claim 33, **characterized** in that said it is arranged to operate in a GSM (Global System for Mobile communication)/GPRS (General Packet Radio Service) or UMTS (Universal Mobile Telecommunications System)
15 system.
40. The network element of claim 33, **characterized** in that it is arranged to transmit said message to be delivered over radio access network.
41. The network element of claim 40, **characterized** in that said radio access network is GERAN (GSM/EDGE Radio Access Network) or UTRAN (UMTS
20 Terrestrial Radio Access Network).
42. The network element of claim 33, **characterized** in that it is substantially the CBC (Cell Broadcast Centre).
43. The network element of claim 33, **characterized** in that said message to be sent is substantially a schedule message.
- 25 44. The network element of claim 33, **characterized** in that said message to be sent is a discrete indication message.
45. The network element of claim 33, **characterized** in that said point-to-multipoint service is substantially a broadcast or multicast service.

46. The network element of claim 33, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

47. A network element (918) operable (920) in a wireless system, comprising
5 processing means (923) and memory means (921) for processing and storing
instructions and data, **characterized** in that it is arranged to receive a notification
from a terminal in relation to at least one of the following: time slot configuration,
modulation type, bit rate, and capability class, and deduce on the basis of said
notification whether the terminal is capable of receiving a point-to-multipoint
10 MBMS (Multimedia Broadcast/Multicast Service) service or not.

48. The network element of claim 47, **characterized** in that it is arranged to accept or reject the terminal's join request based on said decision.

49. The network element of claim 47, **characterized** in that said point-to-multipoint service is substantially a multicast service.

15 50. The network element of claim 47, **characterized** in that the air interface in said system is substantially in accordance with DVB (Digital Video Broadcasting) or WLAN (Wireless Local Area Network) specifications.

51. A system comprising a network element (918) and at least one wireless terminal (900) operable in said system, **characterized** in that said network element
20 (918) comprises means (920) for sending a message indicating requirements for point-to-multipoint MBMS (Multimedia Broadcast/Multicast Service) service reception in relation to at least one of the following: time slot configuration, modulation type, bit rate, and capability class, to be delivered to at least said wireless terminal (900) within the service range and said terminal (900) comprises
25 means (906, 914, 915, 910) for receiving said broadcast message indicating requirements for point-to-multipoint service reception and means (908) for determining on the basis of said requirements whether it is capable of receiving the service or not.

52. The system of claim 51, **characterized** in that said message to be sent is a
30 point-to-multipoint message.

53. The system of claim 51, **characterized** in that said network element (918) further comprises means (923) for defining said requirements for point-to-multipoint service reception.

5 54. The system of claim 51, **characterized** in that said network element (918) further comprises means (920) for receiving said requirements for point-to-multipoint service reception prior to sending said message indicating said requirements.